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FUNCTIONAL TEST REPORT

TASK 8004, SUBTASK 2

NOVEMBER 21, 1980

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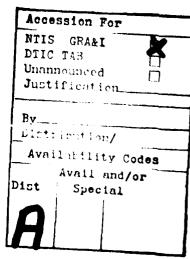
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SECTION 1. GENERAL

1.1 Purpose

The purpose of this Functional Test Report is to:

- a. Briefly describe the tests performed in the execution of the WWMCCS SACLANT Remote Network Processor (SRNP)

 Test And Verification Procedures (Draft), 18 August 1980, using System Release 7.2B with the modification to implement the SACLANT FILTER as delivered under this task. This effort took place at the Command and Control Technical Center, Reston, Virginia.
- b. Document the results of the tests performed.
- c. Identify problems encountered during testing.

1.2 References

The following references were utilized in conducting the tests and in preparing this report:

- a. WWMCCS SACLANT Remote Network Processor (SRNP) Test And Verification Procedures (Draft), 18 August 1980.
- b. SACLANT User's Guide (Final) For Remote Network Processor (RNP) Release 4.0, 17 September 1979.
- c. SACLANT Software Release Bulletin (Final) For Remote Network Processor RNP) Release 4.0, 21 September 1979.

SECTION 2. TEST RESULTS

2.1 Introduction

The <u>WWMCCS SACLANT Remote Network Processor (SRNP) Test And Verification Procedures were executed using WWMCCS Release 7.2B with the modifications to implement the SACLANT FILTER.</u>

2.2 RNP Software Assembly

- a. Test SAC2-01 This test was not required since the Host Resident Software System (HRSS) was Government Furnished Equipment. (HRSS tape number 5887).
- b. Test SAC2-02 Performed a good assembly.

2.3 SRNP Disk Preparation

- a. Test SAC2-03 Successfully generated DUMP 64 Program.
- b. Test SAC2-03A -Successfully formatted the SRNP disk.

2.4 H6000 File System Support

- a. Test SAC2-04 Successfully generated Link Text Loader.
- b. Test SAC2-04A -Produced System Master Catalogs (SMC's) with correct attributes.
- c. Test SAC2-05 Produced a correct permission list for each SMC.

2.5 SRNP Off-Line Disk Preparation

- a. Test SAC3-01 Successfully bootloaded the SACLANT off-line utility program.
- b. Test SAC3-02 Correctly initialized the SRNP disk with the USERID conversion table.

2.6 System Initialization

- a. Test SAC4-01 Successfully bootloaded the H700 with SACLANT RNP software.
- b. Test SAC4-02 Was not performed due to nonavailability of 7.2B compatible Console-to-Console H6000 software.
- c. Test SAC4-03 Was not performed due to nonavailability of 7.2B compatible Console-to-Console H6000 software.

- d. Test SAC4-04 Successfully dumped the H700 system.
- e. Test SAC4-05 Successfully provided an H700 formatted system dump.

2.7 VIP Terminal Operation

- a. Test SAC5-01 Failed because WWMCCS Release 7.2B does not send the "SYSTEM?" message upon which H700 SACLANT keys for recognition of successful log-on.

 Patches were provided to H700 SACLANT to circumvent this problem. Test SAC5-01 was then successful.
- b. Test SAC5-02 Successfully logged-on a VIP 786W.

2.8 Communications Status Command

a. Test SAC5-06 - Produced proper control of the communication device and returned correct statuses.

2.9 Host Operator Control

a. Test SAC5-07 - Verified the proper effects of the H6000 terminal control commands.

2.10 Remote Batch Functionality

- a. Test SAC5-08 Produced correct output control with thru the \$*\$OUT card.
 Test SAC5-10
- b. Test SAC5-11 Produced correct control card effects.
- c. Test SAC5-12 (Multiple job-submission capability) failed; documentation was furnished to the Task Officer for STAR submission.
- d. Test SAC5-12.1-Executed successfully.

2.11 Operator Console Commands

- a. Test SAC5-13 Provided proper results from the Assign Device command.
- b. Test SAC5-14 Provided proper results from the Close Processor command.
- c. Test SAC5015 Provided proper results from the Cancel Assignment command.
- d. Test SAC5-16 Provided proper results from the Enable Device command.
- e. Test SAC5-17 Provided proper results from the File Abort command.

7_7

- f. Test SAC5-18 Provided proper results from the File Backspace command.
- g. Test SAC5-19 Provided proper results from the Process Records.
- h. Test SAC5-20 Provided proper results from the Resume Processing command.
- i. Test SAC5-21 Provided proper results from the Terminate Processor command.
- j. Test SAC5-22 Successfully verified that extended Remote Batch Operator commands operated correctly for Job Status, Abort, Request Output, and Cancel Output requests.
- k. Test SAC5-23 Successfully verified that the Forward Space Output command works.

2.12 Time Sharing System (TSS) Patch Test

a. Test SAC6-01 - Verified correct subsystem access thru denial or allowance in all cases

Test SAC6-03 except the BPRINT/BPUNCH subsystem.

2.13 Management Data Query System (MDQS) Restriction Set

- a. Test SAC6-04 Verified proper capabilities of the SACLANT nonrestricted user.
- b. Test SAC6-05 Verified proper capabilities of the SACLANT restricted user.
- c. Test SAC6-06 Verified proper capabilities of the SACLANT TSS Patch protected user.
- d. Test SAC6-07 Verified that the Data Base Manager commands are available to the Data Base Manager USERID.

2.14 Disk Accounting Save and Display

- a. Test SAC7-01 Verified that the normal operation accounting data was recorded properly.
- b. Test SAC7-02 Verified that the SRNP operation could be restarted without destroying the continuity of the accounting file.
- c. Test SAC7-03 Verified that the accounting file was recoverable.

SECTION 3. TESTING PROBLEMS

3.1 Problems

- a. In order for users to log-on to SACLANT systems, the H700 RNP 4.0 SACLANT software will have to be modified due to the fact that 7.2B H6000 software returns the message "HIS TIMESHARING ON mm/dd/yy at H.FTT TERMINAL xx TS1" instead of "SYSTEM?" upon the successful completion of log-on.
- b. Page 2-6 of the <u>WWMCCS SRNP Test</u> and <u>Verification Procedures</u> has the DUMP 64 Program Generation numbered as Test SAC2-03. Page 2-8 has the Disk Format Procedure also identified as SAC2-03. For purposes of this report, the Disk Format Procedure is identified as SAC2-03A.
- c. Page 2-6.2 of the <u>WWMCCS</u> <u>SRNP</u> <u>Test</u> <u>and Verification</u> <u>Procedures</u> identified as <u>SAC2-04</u>. <u>Page 2-11</u> has the <u>SMC</u> Generation also identified as <u>SAC2-04</u>. For purposes of this report, the <u>SMC</u> Generation is identified as <u>SAC2-04A</u>.

3.2 Conclusion

No other 7.2B SACLANT - H700 RNP 4.0 SACLANT compatibility problems were discovered during this testing effort.

APPENDIX A
FEATURES/TESTS CROSS REFERENCE

Feature	Test
SRNP Initialization HRSS RESTOREMAST	SAC2-01
HRSS Assembly	SAC2-02
DUMP 64 Generation	SAC2-03
Disk Formatter	SAC2-03A
Link Text Loader Generation	SAC2-04
SMC Generation	SAC2-04A
SRNP UPS Generation	SAC2-05
SRNP Bootload	SAC4-01
INITIALIZE	
YES	SAC4-01
NO	SAC7-02
Off-Line Command Processor	
Bootload	SAC3-01
is current disk dictionary OK?	
CR /new disk	SAC3-02
YES /disk ok	SAC7-01
No /reinitialize	
HELP	
END /EXIT /STOP	
CARDS	SAC7-03
TTY	SAC7-03
DELETE	
DICTIONARY	
GENERAL	SAC3-02
LIST	SAC3-02 SAC7-01
OCTAL	

DECIMAL

ASCII /SOURCE /CHARACTER SAC3-02

SYSTEM

CORE

(non-CORE)

FORMAT

SAC7-01

BOOTSTRAP

OVERLAY

FEATURE	TEST	
TSS Restricted Commands	Restricted ID	Nonrestricted ID
BASI	SAC6-01	
DATA	SAC6-01	
JOVI	SAC6-01	
YFOR	SAC6-01	
FORT	SAC6-01	
ALGO	SAC6-01	
CDIN	SAC6-01	
LODX	SAC6-01	
NEWU	SAC6-01	
TSAR	SAC6-01	
TSRI	SAC6-01	
BASY	SAC6-01	
FDUM	SAC6-01	
SABT	SAC6-01	
RECO	SAC6-01	
BEXP	SAC6-01	
RUNY	SAC6-01	
JDAC	SAC6-01	
LODS	SAC6-01	
LODT	SAC6-01	
TRAC	SAC6-01	
IDSQ	SAC6-01	
PSWD	SAC6-01	
LDSP	SAC6-01	
DCLT	SAC6-01	
QANL	SAC6-01	

FEATURE	TEST		
TSS Restricted Commands	Restricted ID	Nonrestricted ID	
EXUT	SAC6-01		
TRFL	SAC6-01		
OPRM	SAC6-01		
OREC	SAC6-01		
OFLD	SAC6-01		
DBLP	SAC6-01		
DBRT	SAC6-01		
DBCR	SAC6-01		
DBDE	SAC6-01		
DBVE	SAC6-01		
DBAN	SAC6-01		
,YP0	SAC6-01		
.471	SAC6-01		
.YP2	SAC6-01		
.453	SAC6-01		
.YP4	SAC6-01		
. YP5	SAC6-01		
.YP6	SAC6-01		
.YLD	SAC6-01		
ALDB	SAC6-01		
DSTS	SAC6-01		
PERF	SAC6-01 SAC6-05	SAC6-04	
	SAC6-05		
WWDI	SAC6-01 SAC6-05	SAC6-04	
	SAC6-06		
PRIV	SAC6-01 SAC6-05 SAC6-06	SAC6-04 SAC6-07	

FEATURE	TEST	
TSS Restricted Commands (cont.)	Restricted ID	Nonrestricted ID
LIBU	SAC6-01	
CWGA	SAC6-01	
CWGB	SAC6-01	
CWGC	SAC6-01	
CWGD	SAC6-01	
CWGH	SAC6-01	
CWGI	SAC6-01	
IIDS	SAC6-01	
DBCS	SAC6-01	
DTCO	SAC6-01	
DTVF	SAC6-01	
DTAB	SAC6-01	
DTGF	SAC6-01	
DTLS	SAC6-01	
TALK	SAC6-01	
MESS	SAC6-01	
STUS	SAC6-01	
MONI	SAC6-01	
WHOS	SAC6-01	
UPDA	SAC6-01	
SMCL	SAC6-01	
PRIO	SAC6-01	
MUPD	SAC6-01	
MAST	SAC6-01	
TCON	SAC6-01	
JRUN	SAC6-01	

SAC6-01

WISP

FEATURE

TEST

TSS Restricted Commands (cont.)	Restricted ID	Nonrestricted ID
GRID	SAC6-01	
COBR	SAC6-01	
SORT	SAC6-01	

FEATURE	TEST		
TSS Nonrestricted Command	Restricted ID	Nonrestricted ID	
CARD	SAC6-03	•	
ACCE	SAC6-03		
EDIT	SAC6-02 SAC6-03		
EDTX	SAC6-03		
BYE	SAC6-03		
LOGO	SAC6-03		
STAT	SAC6-03		
CONN	SAC6-03		
HELP	SAC6-03		
SAVE	SAC6-03		
RESE	SAC6-03		
DELE	SAC6-03		
CL DN	SAC6-03		
BSED	SAC6-03		
LIST	SAC6-03		
LENG	SAC6-03		
TAPE	SAC6-03		
EDBN	SAC6-03		
NEW	SAC6-03		
TERM	SAC6-03		
AUTO	SAC6-03		
LINE	SAC6-03		
GET	SAC6-03		
CATA	SAC6-03		
PERM	SAC6-03		
REMO	SAC6-03		

FEATURE			TES	<u>T</u>
TSS Nonrestricted	Command	(cont.)	Restricted ID	Nonrestricted ID
PRIN			SAC6-03	
SCAN			SAC6-03	
RUNO			SAC6-03	
JSTS			SAC6-03	
ABC			SAC6-03	
HOLD			SAC6-03	
SEND			SAC6-03	
JABT			SAC6-03	
ASCB			SAC6-03	
BPRI			SAC6-03	
BPUN			SAC6-03	
APRI			SAC6-03	
BCDA			SAC6-03	
PURG			SAC6-03	
RELE			SAC6-03	
ERAS			SAC6-03	
RESA			SAC6-03	
JMES			SAC6-03	
NOPA			sac6-03	
PARI			SAC6-03	
JOUT			SAC6-03	
ASCA			SAC6-03	
PWSS			SAC6-03	
TSEC			SAC6-03	
LEAD			SAC6-03	
SYST			SAC6-03	
EBLD			SAC6-93	

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FEATURE	TEST	
TSS Nonrestricted Command (cont.)	Restricted ID	Nonrestricted ID
CRUN	SAC6-03	
DABT	SAC6-03	
DRUN	SAC6-03	
CPOS	SAC6-03	
CMOD	SAC6-03	
COUT	SAC6-03	
REDI	SAC6-03 SAC6-05	SAC6-04 SAC6-07
	SAC6-06	bhoo o,
WWDM	SAC6-03	SAC6-04
	SAC6-05	SAC6-07
	SAC6-J6	
B3RU	SAC6-03	
WWP 2	SAC6-03	
WWP 3	SAC6-03	
WWP 4	SAC6-03	
WWPQ	SAC6-03	
WWPG	SAC6-03	
WWPC	SAC6-03	
WWTU	SAC6-03	SAC6-04
WW10	SAC6-05	21.00 04
	SAC6-06	
SINI	SAC6-03	SAC6-04
SINI	SAC6-05	SAC6-07
	SAC6-06	
		arac 04
DJST	SAC6-03	SAC6-04
	SAC6-05 SAC6-06	
	3AC0-00	
ADFQ	SAC6-03	SAC6-04
	SAC6-05	
	SAC6-06	

FEATURE TEST TSS Nonrestricted Command (cont.) Restricted ID Nonrestricted ID SAC6-03 SAC6-04 **WWBC** SAC6-05 SAC6-06 SAC6-03 SAC6-04 DFAU SAC6-05 SAC6-06 WWLI SAC6-03 SAC6-04 SAC6-05 SAC6-06 CMDL SAC6-03

TEST **FEATURE** Presence of UPS code to allow MDQS functions SAC2-05 RUNS SAC2-05 RUNP SAC2-05 PERFORM SAC2-05 PERF-MACROS SAC2-05 **PRIVACY** SAC2-05 WRITE SAC2-05 UPD-CREATE SAC2-05 UPD-RESTORE SAC2-05 UPD-INSERT SAC2-05 UPD-DELETE SAC2-05 UPD-STORE SAC2-05 KEEP SAC2-05 SUBSET SAC2-05 QUERY SAC2-05 TALK SAC2-05 RPT-COPY SAC2-05 RUNJ SAC2-05 **BCL-BROWSE** SAC2-05 **BCL-UPDATE** SAC2-05 BCL-LOAD SAC2-05 BCL-EXTRACT SAC2-05 RUNF SAC2-05 ADF SAC2-05 DDL SAC2-05 RESTRUCTURE SAC2-05 DIRECTORY SAC2-05

DMS

<u>Feature</u>

Test

Absence of UPS code to

disallow MDOS functions

RUNS

RUNP SAC2-05

PERFORM SAC2-05

PERF-MACROS SAC2-05

PRIVACY SAC2-05

WRITE

UPD-CREATE

UPD-RESTORE

UPD-INSERT

UPD-DELETE

UPD-STORE

KEEP

SUBSET

QUERY

TALK

RPT-COPY

RUNJ

BCL-BROWSE

BCL-UPDATE

BCL-LOAD

BCL-EXTRACT

RUNF

ADF

DDL

Feature

Test

Absence of UPS code to

disallow MDQS functions

RESTRUCTURE

DIRECTORY

SAC2-05

DMS

3 . 1

FEATURE

TEST

Remote Batch Functions

\$*\$id userid\$password/class. SAC5-08 SAC5-12
\$*\$RCD SAC5-08 thru SAC5-12

\$*\$OUT SAC5-08 SAC5-09 SAC5-11 SAC5-12

\$*\$OUTsnumb SAC5-10

\$*\$DIS SAC5-09 SAC5-11

\$*****\$**T**S

\$*\$STSid

\$*\$STSsnumb SAC5-11

\$*\$ABT SAC5-11

APPENDIX B

TEST ANALYSIS REPORT AND

TEST RESULTS SUMMARY

* Result Codes:

Test terminated as expected and provided the expected output

Test failed to terminate as expected and/or provided unexpected results. Test was not run - state reason Œ,

TEST RESULTS SUMMARY CHART

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* Result Codes:

Test terminated as expected and provided the expected output

* - Test was not run - state reason

Test failed to terminate as expected and/or provided unexpected results.

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* Result Codes:

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- Test terminated as expected and provided the expected output
 - * Test was not run state reason
- Test failed to terminate as expected and/or provided unexpected results.

APPENDIX C
TEST PACKAGE ABSTRACT

AREA SACLANT RNP

REFERENCE SACLANT Remote Network Processor User's Guide

CLASSIFICATION Test Package - Unclassified

Software Documentation - Unclassified

Computer Time - Unclassified/Shared

RESOURCES	Man Hrs.	Machine Hrs.
Review	6	
Test	22	22
Analysis	4	
	32	22

SCOPE

SACLANT RNP consists of a modified version of the standard RNP software and a patch to the H6000 host software. The H700 software modifications provide additional security for logging and a record of terminal use. The TSS Patch prevents the restricted user from penetrating outside the MDQS subsystem, and reports attempts made by the users to access unsecure systems. The SACLANT Remote Network Processor Test and Verification Procedures are designed to test and evaluate the following functions:

- 1. Boot procedures
- Remote Batch Terminal System (RBTS) operations and Remote Message Concentration System (RMCS) operations
- 3. RNP operator command capabilities
- 4. Effect of H6000 console commands on RNP operation
- 5. The ability of SACLANT to restrict specific users from executing unsecure TSS with MDQS commands.

APPENDIX D
TEST OUTPUT (Separately Bound)

